

In the Claims

1. (currently amended) A method for increasing rotational velocity of a data storage disc in a disc drive, the method comprising steps of:

(a) accelerating the data storage disc a medium at a first acceleration rate from an initial rotational velocity to a first predetermined rotational velocity;

(b) subsequently accelerating the medium data storage disc at a second acceleration rate from the first predetermined rotational velocity to a threshold rotational second velocity; and

(c) as the data storage disc rotates at the threshold rotational velocity, moving a transducer over the medium from a parked position responsive to a one of the first velocity and second velocity landing zone to a data region on a surface of the data storage disc, wherein the threshold rotational velocity creates and maintains an air bearing between the transducer and the surface of the disc.

2. (currently amended) A method as defined in claim 1, wherein the threshold rotational second velocity is a final rotational velocity creating and maintaining the an air bearing as the transducer radially traverses across the disc medium between an inner diameter and an outer diameter.

3. (currently amended) A method as defined in claim 2, wherein the accelerating step (b) comprises further comprising the steps of:

(i) accelerating the data storage disc medium at at least one more the second acceleration rate between accelerating steps (a) and (b) from the first predetermined rotational velocity to a second predetermined rotational velocity;

(ii) accelerating the data storage disc at one or more next acceleration rates from the second predetermined rotational velocity to the threshold rotational velocity if the second predetermined rotational velocity does not equal the threshold rotational velocity.

4. (currently amended) A method as defined in claim 2, wherein:

the accelerating step (a) comprises accelerating the ~~data-storage-disk-medium~~ at the first acceleration rate between an initial time corresponding to the ~~an~~ initial rotational velocity and a first predetermined time corresponding to the first ~~predetermined rotational~~ velocity; and

the accelerating step (b) comprises accelerating the ~~data-storage-disk-medium~~ at the second acceleration rate between the first predetermined time and a ~~threshold-second~~ time corresponding to the ~~threshold rotational-second~~ velocity.

5. (currently amended) A method as defined in claim 4~~1~~, wherein the

moving step (c) comprises a step of:

displacing the transducer from the ~~a~~ landing zone ~~at the threshold time~~.

6. (currently amended) A method as defined in 1, wherein the ~~threshold~~

~~rotational-first~~ velocity is an early exit velocity creating the ~~an~~ air bearing as the transducer exits the landing zone ~~and accesses the data region~~.

7. (currently amended) A method as defined in claim 6 further comprising a

step of:

(d) accelerating the ~~data-storage-disk-medium~~ at a third acceleration rate between the first and second acceleration rates from the threshold rotational velocity to a final rotational velocity maintaining the air bearing as the transducer locates to an outer diameter of the data-storage-disk.

Claims 8-12 (canceled).

13. (currently amended) An apparatus including circuitry and executable

program instructions that are configured to perform a program storage device readable by a computer system tangibly embodying a program of instructions executable by the computer system to perform a method for increasing rotational velocity of a data storage disk in a disk drive, the method comprising steps of:

(a) ~~accelerating the data storage disc at a first acceleration rate from an initial rotational velocity to a first predetermined rotational velocity;~~

(b) ~~accelerating the data storage disc at a second acceleration rate from after achieving the first predetermined rotational velocity to a threshold second rotational velocity; and~~

(c) ~~as the data storage disc rotates at a one of the group consisting of the first rotational velocity and the second threshold rotational velocity, moving a transducer from a landing zone to a data region on a surface of the data storage disc, wherein the threshold rotational velocity creates and maintains an air bearing between the transducer and the surface of the disc.~~

14. (currently amended) ~~An apparatus program storage device as defined in claim 13, wherein the threshold second rotational velocity is a final rotational velocity creating and maintaining the an air bearing as the transducer radially traverses across the disc between an inner diameter and an outer diameter.~~

15. (currently amended) ~~An apparatus program storage device as defined in claim 14, wherein the accelerating step (b) of the method comprises steps of:~~

(i) ~~accelerating the data storage disc to the first rotational velocity at the second first acceleration rate from the first predetermined rotational velocity to a second predetermined rotational velocity;~~

(ii) ~~accelerating the data storage disc to the second rotation velocity at one or more next a second acceleration rates from the second predetermined rotational velocity to the threshold rotational velocity if the second predetermined rotational velocity does not equal the threshold rotational velocity.~~

16. (currently amended) ~~An apparatus program storage device as defined in claim 14, wherein:~~

~~the accelerating step (a) comprises accelerating the data storage disc at the a first acceleration rate between an initial time corresponding to the an initial rotational velocity~~

and a first ~~predetermined~~ time corresponding to the first ~~predetermined~~ rotational velocity; and

the accelerating step (b) comprises accelerating the data-storage disc at the a second acceleration rate between the first predetermined time and a ~~threshold-second~~ time corresponding to the ~~threshold-second~~ rotational velocity.

17. (currently amended) ~~An apparatus program storage device~~ as defined in claim 16, wherein the moving step (c) of the method comprises a step of:
displacing the transducer from the landing zone ~~at the threshold time~~.

Claim 18 (canceled).

19. (currently amended) ~~An apparatus program storage device~~ as defined in claim 158, wherein the method further comprises a step of:

(d) accelerating the data-storage disc at a third acceleration rate between the first and second acceleration rates ~~from the threshold rotational velocity to a final rotational velocity~~ maintaining the air bearing as the transducer locates to an outer diameter of the data storage disc.

Claims 20-24 (canceled).

25. (currently amended) ~~An apparatus disc drive having a data storage disc rotably mounted to a base plate and operable to spin at a rotational velocity and an actuator arm mounted on the base plate adjacent the disc, the disc drive comprising:~~

a transducer attached to the an actuator arm and parkable on a landing zone on a surface of a medium ~~the disc~~, the transducer being operable to move over the surface of the disc-medium as the disc-medium reaches a ~~threshold rotational~~ desired velocity; and
means-circuitry for accelerating the data storage disc-medium at multiple acceleration rates to corresponding velocities, wherein one of said velocities is the desired velocity ~~from an initial rotational velocity to the threshold rotational velocity~~.

26. (currently amended) ~~An apparatus-disc drive~~ as defined in claim 25
~~wherein further comprising:~~
~~means for moving the transducer is moved from the landing zone over the~~
~~medium to a data region on the disc at the threshold rotational responsive to the desired~~
velocity.

27. (currently amended) ~~An apparatus-disc drive~~ as defined in claim 26,
wherein the threshold rotational velocity is a final rotational velocity creating and
maintaining an air bearing between the transducer and the surface of the disc as the
transducer radially traverses across the disc between an inner diameter and an outer
diameter.

28. (currently amended) ~~An apparatus-disc drive~~ as defined in claim 26,
wherein the threshold rotational velocity is an early exit velocity creating an air bearing
between the transducer and the surface of the disc as the transducer exits the landing zone
and accesses the data region.

29. (new) The method of claim 1 wherein the first acceleration is greater than the
second acceleration.

30. (new) The method of claim 1 wherein the parked position is associated with a
landing zone.

31. (new) The method of claim 1 wherein the step of moving is responsive to the
medium rotating at the second velocity.

32. (new) The apparatus of claim 13 wherein the transducer is moved responsive
to the storage disc rotating at the threshold velocity.

33. (new) The apparatus of claim 13 wherein the transducer is moved responsive
to the storage disc rotating at the first rotational velocity.

34. (new) The apparatus of claim 13 wherein the accelerating step (a) accelerates the storage disc at a first acceleration rate to the first rotational velocity and the accelerating step (b) accelerates the storage disc at a second acceleration rate to the second rotational velocity.